

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**In re United States Patent Application of:**

Applicant: BAUER, et al.
Application No.: 10/088,773
Date Filed: March 18, 2002
Priority Date Claimed: October 15, 1999 (German Appl. No. 199 49 720.0)
Title: METHOD AND DEVICE FOR CONTINUALLY PRODUCING AN EXTRUSION SOLUTION

Docket No.: 4197-113**Examiner:** Not Yet Assigned**Art Unit:** 1724COPY OF PAPER
ORIGINALLY FILED**23448**

PATENT & TRADEMARK OFFICE

FIRST CLASS MAIL CERTIFICATE

I hereby certify that I am mailing the attached documents to the Commissioner for Patents on the date specified, in an envelope addressed to the Commissioner for Patents, Washington, DC 20231, and First Class Mailed under the provisions of 37 CFR 1.8.

Blake Crouch

July 29, 2002

Date of Mailing

**SUBMISSION OF ENGLISH TRANSLATION OF THE INTERNATIONAL
 PRELIMINARY EXAMINATION REPORT FOR PCT/DE00/03411 IN U.S. PATENT
 APPLICATION NO. 10/088,733**

Commissioner for Patents
 Washington, D.C. 20231

Sir:

Enclosed please find the English translation of the International Preliminary Examination Report for PCT/DE00/03411 in U.S. Patent Application No. 10/088,733.

Respectfully submitted,

Mariabne Fuierer
 Registration No. 39,983
 Attorney for Applicants

INTELLECTUAL PROPERTY/
 TECHNOLOGY LAW
 P.O. Box 14329
 Research Triangle Park, NC 27709
 Phone: (919) 419-9350
 Fax: (919) 419-9354
 Attorney File: 4197-113

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PATENT COOPERATION TREATY

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**NOTIFICATION OF TRANSMITTAL
OF COPIES OF TRANSLATION
OF THE INTERNATIONAL PRELIMINARY
EXAMINATION REPORT**

(PCT Rule 72.2)

Eingang from the INTERNATIONAL BUREAU

To: 04. Juli 2002

BRANDENBURG, Thomas
Frankfurter Strasse 68
53773 Hennef
ALLEMAGNE

Date of mailing (day/month/year) 22 June 2002 (22.06.02)	IMPORTANT NOTIFICATION
Applicant's or agent's file reference Aic 7/PCT	
International application No. PCT/DE00/03411	International filing date (day/month/year) 29 September 2000 (29.09.00)
Applicant ALCERU SCHWARZA GMBH et al	

1. Transmittal of the translation to the applicant.

The International Bureau transmits herewith a copy of the English translation made by the International Bureau of the international preliminary examination report established by the International Preliminary Examining Authority.

2. Transmittal of the copy of the translation to the elected Offices.

The International Bureau notifies the applicant that copies of that translation have been transmitted to the following elected Offices requiring such translation:

CA, CN, JP, KP, KR, US

The following elected Offices, having waived the requirement for such a transmittal at this time, will receive copies of that translation from the International Bureau only upon their request:

AP, EA, EP, AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CH, CR, CU, CZ, DK, DM, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, KE, KG, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW, OA

3. Reminder regarding translation into (one of) the official language(s) of the elected Office(s).

The applicant is reminded that, where a translation of the international application must be furnished to an elected Office, that translation must contain a translation of any annexes to the international preliminary examination report.

It is the applicant's responsibility to prepare and furnish such translation directly to each elected Office concerned (Rule 74.1). See Volume II of the PCT Applicant's Guide for further details.

The International Bureau of WIPO
34, chemin des Colombettes
1211 Geneva 20, Switzerland

Authorized officer

El Mostafa MOUSSAID

Facsimile No. (41-22) 740.14.35

Telephone No. (41-22) 338.83.38

Translation

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INTERNATIONAL PRELIMINARY EXAMINATION REPORT

(PCT Article 36 and Rule 70)

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Applicant's or agent's file reference Alc 7/PCT	FOR FURTHER ACTION See Notification of Transmittal of International Preliminary Examination Report (Form PCT/IPEA/416)	
International application No. PCT/DE00/03411	International filing date (day/month/year) 29 September 2000 (29.09.00)	Priority date (day/month/year) 15 October 1999 (15.10.99)
International Patent Classification (IPC) or national classification and IPC C08B 1/00		
Applicant ALCERU SCHWARZA GMBH		

<p>1. This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.</p> <p>2. This REPORT consists of a total of <u>5</u> sheets, including this cover sheet.</p> <p><input type="checkbox"/> This report is also accompanied by ANNEXES, i.e., sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).</p> <p>These annexes consist of a total of _____ sheets.</p>	
<p>3. This report contains indications relating to the following items:</p> <p>I <input checked="" type="checkbox"/> Basis of the report</p> <p>II <input type="checkbox"/> Priority</p> <p>III <input type="checkbox"/> Non-establishment of opinion with regard to novelty, inventive step and industrial applicability</p> <p>IV <input type="checkbox"/> Lack of unity of invention</p> <p>V <input checked="" type="checkbox"/> Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement</p> <p>VI <input type="checkbox"/> Certain documents cited</p> <p>VII <input type="checkbox"/> Certain defects in the international application</p> <p>VIII <input type="checkbox"/> Certain observations on the international application</p>	

Date of submission of the demand 14 April 2001 (14.04.01)	Date of completion of this report 14 December 2001 (14.12.2001)
Name and mailing address of the IPEA/EP	Authorized officer
Facsimile No.	Telephone No.

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No.

PCT/DE00/03411

I. Basis of the report

1. With regard to the elements of the international application:*

- ☐ the international application as originally filed
- ☒ the description:
 pages 1-9, as originally filed
 pages, filed with the demand
 pages, filed with the letter of
- ☒ the claims:
 pages 1-11, as originally filed
 pages, as amended (together with any statement under Article 19)
 pages, filed with the demand
 pages, filed with the letter of
- ☒ the drawings:
 pages 1/1, as originally filed
 pages, filed with the demand
 pages, filed with the letter of
- ☐ the sequence listing part of the description:
 pages, as originally filed
 pages, filed with the demand
 pages, filed with the letter of

2. With regard to the language, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item. These elements were available or furnished to this Authority in the following language _____ which is:

- ☐ the language of a translation furnished for the purposes of international search (under Rule 23.1(b)).
- ☐ the language of publication of the international application (under Rule 48.3(b)).
- ☐ the language of the translation furnished for the purposes of international preliminary examination (under Rule 55.2 and/or 55.3).

3. With regard to any nucleotide and/or amino acid sequence disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:

- ☐ contained in the international application in written form.
- ☐ filed together with the international application in computer readable form.
- ☐ furnished subsequently to this Authority in written form.
- ☐ furnished subsequently to this Authority in computer readable form.
- ☐ The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.
- ☐ The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

4. ☐ The amendments have resulted in the cancellation of:

- ☐ the description, pages _____
- ☐ the claims, Nos. _____
- ☐ the drawings, sheets/fig _____

5. ☐ This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).**

* Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report since they do not contain amendments (Rule 70.16 and 70.17).

** Any replacement sheet containing such amendments must be referred to under item 1 and annexed to this report.

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V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Claims	1-11	YES
	Claims		NO
Inventive step (IS)	Claims		YES
	Claims	1-11	NO
Industrial applicability (IA)	Claims	1-11	YES
	Claims		NO

2. Citations and explanations

Citations

D1: DE-A-44 39 149 (THUERINGISCHES INST TEXTIL)
9 May 1996 (1996-05-09).

Inventive step (PCT Article 33(3))

Example 8 of D1 discloses a process for forming cellulosic shaped bodies, said method comprising the following steps:

- (a) formation of a cellulose suspension from cellulose and an aqueous phase with a cellulose/water ratio of 1:10, the mixture being stirred for 120 minutes whilst cellulose enzymes are added;
- (b) separation of the aqueous phase until the water content lies at 37.5% and feeding back of the separated aqueous phase into step (a);
- (d) feeding of the moist cellulose obtained into a double screw extruder and addition of NMMO into the first zone of the double screw extruder, the two components being mixed; and
- (e) evaporation of the excess water in the extruder to produce a homogeneous extrusion solution.

As already specified above, step (a) is carried out during stirring, i.e. shearing. In this regard reference is also made to Claim 10, which explicitly discloses shearing. It is also pointed out that in an extrusion process as disclosed in D1, shearing automatically occurs. Consequently, steps (d) and (e) disclosed in D1 also take place during shearing. Following step (d) the NMMO content is 78 wt.% and therefore lies within the claimed range (this content was calculated from: the total quantity of liquid: 259 g/min and the addition of NMMO: 203 g/min (calculated from the addition of NMMO/water and the mol-ratio of NMMO:water)).

The claimed method therefore differs from the method disclosed in D1 merely in that in step (c), which is not disclosed in D1, the cellulose dewatered in step (b) is homogenised in a first shearing zone.

The present invention therefore addresses the problem of accelerating the formation of the solution in step (e) and of washing out soluble attendant materials through the amine oxide-free steps (a) and (b). The latter problem can be considered to be solved in D1, since steps (a) and (b) of that document are identical. Furthermore, dissolution of the cellulose takes place in D1 within 5 minutes (Example 8), and therefore the first problem can also be considered to be solved.

The objective problem addressed by the present invention therefore consists in the development of an additional method step, namely the shearing of the moist cellulose before the addition of NMMO. However, the mere development of an additional

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

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method step that is perfectly common in solution technology can contribute nothing to inventive step without proof of a surprising effect. Consequently, the subjects of Claims 1-11 lack inventive step in relation to D1.